indulged in. Medical botany is of secondary consideration, and the author is no doubt impelled to this by the full instruction which Scotch students receive in that department, and the co-existence of the admirable treatise on the subject by Dr. Lindley. The account of drugs met with in the English market is clear and concise, and their chemical constitution correctly given, in accordance with the most recent analyses.

There are certain subjects to which Dr. Christison appears to have given especial attention; the chapters upon these are peculiarly rich with information. Conium is one of them, which by him has been experimented on. The test for the activity of this drug, which originated with the Edinburgh College, is invaluable, we mean that by liquor potassæ. Another of these is scammony. Dr. Christison's investigations into the purity of this drug, have presented the subject in its true light, and shown that the grossest impositions have been practised. Sophisticated scammony is most common in the English market, and by the author has been divided into three kinds, which are termed *calcareous, amylaceous,* and *calc-amylaceous.* The worst of the specimens contained by analysis 42·4 per centum of resin. Bad as these may be, they must be decidedly active when compared with the stuff designated as scammony, and sold as of *first quality* in the United States. One lot which was extensively distributed, and which during the past year fell under our observation, contained but 6 per cent. of resin; the basis of it was gum tragacanth. The moral sense of the drug-community must either be greatly depraved, or else extreme ignorance prevails in it, to tolerate such imposition. The recent act of Congress with regard to adulterated and spurious articles, will, we hope, aid and facilitate the exposure of all such imposition.

For the chemical examination of articles employed in medicine, we are indebted to European, and more especially, to continental experimenters. The rich reward of fame is justly due the chemists who have zealously and indefatigably laboured in this field of research; a few laurels, however, might be awarded those who in this country have manifested a similar spirit, and really have contributed their quota to the progress of analysis. We are prompted to this reflection from the examination of the article on Lobelia, in which not one word is mentioned of the researches of Mr. Procter, although he, at least ten years back, satisfactorily isolated the principle upon which the activity of the drug depends, and by a continued series of experiments since, has studied its characters and properties. His papers are published in the American Journal of Pharmacy. We might excuse Dr. Christison for such omission, but in the reprint justice should have prompted, as well as policy suggested, the completion of the chemical history.

Upon turning over the pages some slight errors are observable. as for instance, in attributing the Tahiti arrowroot to Tacca pinnatifida. Mr. Nuttall, several years ago, described the plant affording Sandwich Island arrowroot, and gave to it the name of *T. oceanica,* because so widely differing from the Asiatic species as to constitute a different one.

The Dispensatory issued on this side the Atlantic, differs from the original Edinburgh edition in the additions of numerous illustrations, which, with the specification of the processes of the United States Pharmacopœia, its nomenclature, and an account of indigenous products, constitute the labours of the editor. The book, then, is replete with valuable information; it is one of the standards of the day; and as such, must meet with the favour it deserves. J. C.

ART. XXII.—*Lead Diseases: a Treatise from the French of L. Tanquerel des Planches, with Notes and Additions on the Use of Lead Pipe and its Substitutes.* By SAMUEL L. DANA, M. D., L. L. D., p. 441. Daniel Bixby & Co., Lowell, 1848.

This most important and valuable work contains a great amount of information which is accessible to the members of the profession nowhere else, and which it is dangerous for them to be without. It is much to be regretted, that the original work of Tanquerel, with the observations of Dr. Dana, and of many physicians, both abroad and at home, had not sooner been made public, and urged upon the public attention in this country. But, better late than never. We are entirely

satisfied, from our own experience and inquiries, that there is an immense and a daily increasing amount of disease in various parts of the country, the cause of which is overlooked or unknown, and which is occasioned by the poison of lead. With the light now shed upon this subject, it will be the fault and the blame of physicians, if this prolific source of suffering and ill health is allowed any longer, through ignorance or inattention on their part, to exist.

We do not propose to enter upon any systematic review of the work of Tanquerel and Dana, or to give ony detailed synopsis of its contents. The late period at which it was received, if there were no other reasons, would deter us from either of these undertakings. But there are other reasons. The contents of the work are so multifarious as to defy any satisfactory analysis within reasonable limits, and they are so important that every physician is bound, by all the obligations of duty and of interest, to make himself thoroughly acquainted with them by direct reference to the book itself.

Tanquerel's treatise, in two volumes, containing about eleven hundred pages, was published in 1838. It received in 1841, from the Royal Academy of Medicine, the Montyon prize of 6000 francs. Dr. Dana says of his own volume, that it is both a translation and an abridgment. In condensing the original, he has aimed to give faithfully the meaning of his author, without confining himself to a simple rendering of his language.

The body of the work is divided into five parts, devoted respectively to the following subjects, to wit:—*Lead Colic; Lead Arthralgy; Lead Paralysis; Lead Encephalopathy;* and the *Preservative Treatment* of lead diseases. Fourteen elaborate chapters are given to the consideration of lead colic!

With these few preliminary remarks, we wish now to call the attention of our readers particularly to the subject of *lead pipe as a water conduit, in connection with lead diseases.* Dr. Dana's appendix of about seventy pages is mostly taken up with this subject, and it is this portion of his work which will at this time and in this country attract, as it deserves, the largest share of attention. From its cheapness and its admirable adaptation to this end, the use of lead pipe for the distribution and delivery of water for domestic porposes, in this country, has become almost universal; a great deal of this pipe is more or less acted upon by the water that passes through it. The amount of the solvent action of the water upon the lead varies very greatly in different circumstances; and it depends principally upon the quality of the water. When this contains certain salts in considerable quantity the solvent action is slight, or hardly appreciable, or it may cease altogether; under other conditions, as where the water is free or nearly free from salts, soft and pure, this action is energetic and constant In the former case, the action of the water upon the lead is prevented by the formation of an insoluble lining upon its inner surface. In this connection it is important to state that the results of experiment in the laboratory are not to be regarded as conclusive so far as the practical question is concerned; the action of the water may cease upon a short piece of pipe in the hands of the chemist, while it continues in pipe used for domestic purposes. The most common and efficient protective salts are sulphate and carbonate of lime.

Dr. Christison, after a careful investigation of the subject, comes to the following conclusions on the use of lead for transmitting water.

"1. Lead pipe ought not to be used for this purpose, at least where the distance is considerable, without a careful examination of the water to be transmitted.

"2. The risk of dangerous impregnation of lead is greatest in the instance of the purest water.

"3. Water which tarnishes polished lead, when left upon it a few hours, cannot safely be transmitted through lead pipes, without certain precautions. Conversely, it is probable, though not proved, that if polished lead remains untarnished or nearly so, twenty-four hours in a glass of water, the water may be safely conducted through lead pipes.

"4. Water containing less than about an 8000th of salts in solution, cannot safely be conducted in lead pipes without certain precautions.

"5. Even this proportion will prove insufficient to prevent corrosion, unless a considerable part of the saline matter consists of carbonates and sulphates, especially the former.

"6. So large a proportion as a 4000th, probably even a considerably larger proportion, will be insuffieient if the salts be in a great measure muriates.

"7. In all eases, even though the composition of the water seems to bring it within the conditions of safety now stated, an attentive examination should be mado of the water after it has been ronning a few days through the pipes, for it is not improbable that other circumstances besides those hitherto ascertained may regulate the preventive influence of neutral salts."

We have room now for only a single remark in regard to the forms of disease resulting from the poison of lead derived from lead pipes. This whole subject is comparatively new. There is reason, however, to think that the violent acute disease called *lead colic*, so frequently attacking workers in lead, and painters, is not so often the result of lead poisoning from water pipes, as *neuralgio* and *partiol paralysis*. It is a matter deserving immediate and most serious consideration, whether tho great inerease which has reeently taken plaee in the amount of neuralgic affeetions, may not be, in no small degree, dependent upon the use of lead pipe for the transmission of water for domestie uses. E. B.

Art. XXIII.—*Annuaire de lo Mortalité Génévoise, Publié sur l'invitotion du Conseil de Santé.* Par le Docteur Marc D'Espine, Membre du Conseil de Santé, Médecin de Prisons et de l'Institut des sourds-muets du Canton de Genève, Membre de plusieurs sociétés savantes. Annés 1844 et 1845; Genève, 1847. Brochure, p. 62.

Geneva can boast of a registration of the mortality, births, &c., of her inhabitants, extending farther back than that of any other city of modern Europe—even to the year 1549. The records of three hundred years are now a most valuable acquisition, affording the best possible means of drawing comparisons between different periods, and ascertaining the influences exerted through the improvements in civilization. The fact they demonstrate, of the great inerease in the mean duration of life, is itself sufficient to show the great value of registration, so tardily adopted, and carelessly attended to, in other eities, especially those in the New World.—We learn from the Genevese records, that towards the close of the seventeenth century, the probable duration of life was not over twenty years; at the close of the eighteenth century it attained to thirty-two years, and at present it has reached forty-five years.

The report under consideration shows the refinement to which the system of registration has been brought in Geneva. It gives not only the soms of mortality, but the specific cause of each recorded death, with its general character and duration. The following few examples will illustrate the plan pursued.—*Février 2e, f. 54. Pneumonia gouche, 15 jours de malodie. Mors 6 m. 63 Pneumonie, base droite, mort en 7 jours. Juin 44 rm. Erysipèle de lo face, mort le 8me jour (autopsie), meningée saine, cervelet ramolli. Setem. 31, pf. Grossesse, péritonite hémorrhagique, expulsion d'un fœtus de 6 semnines pendant la moladie (autopsie), péritonine plein de sang, pas de foyer hémorrhagique evident.*

Through a system of abbreviations and signs, a lioe or two is made to show the most important information relative to each decease recorded. Thus, the figures following the date, indicate the age. If this sum is not followed by any letter, it signifies years; if followed by an *m*, or a *j*, or an *h*, it shows the months, days and hours. In a very few eases, where the age could not be indieated, ciphers were substituted. The letters *m*, or *f*, indicate tbe sex, whether masculine or feminine. Sometimes the sexual letter is preceded by an *r*, or a *p*, when it signifies that the individual was rich or poor. The deaths of citizens are distinguished from those of the country, by the letters indicating the sex and condition being plàced perpendicular, whilst those for the country are in *italics*.

So much for the partieular signs. The general arrangement admits, 1st, of a comparison of the whole number of deaths with the population. 2dly, a comparison of the deaths of the rich and the poor, from the eity or country. 3dly, the law of mortality as influeneed by months, seasons and different ages. 4thly, the mean duration of life at any given age, with the average mortality, &c. Me-